The Beagle, Records of the Museums and Art Galleries of the Northern Territory, 2011 **27**: 23–25

The vine *Embelia tiwiensis* (Angiospermae: Myrsinaceae), a new species from the Northern Territory, Australia

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ABSTRACT

The vine *Embelia tiwiensis* is a new species occurring on Bathurst and Melville islands, Northern Territory. It is described from sterile specimens based on distinctive leaf characters as no flowering or fruiting material was available. A key to species of *Embelia* from the Northern Territory and Timor is provided for comparison.

KEYWORDS: Myrsinaceae, Primulaceae, *Embelia*, new species, *Embelia tiwiensis*, Tiwi Islands.

INTRODUCTION

Embelia Burm. f. is a genus of about 130 species (Ståhl & Anderberg 2004) occurring in the Old World tropics. It is one of six genera in the family Myrsinaceae occurring in Australia. Recently the Angiosperm Phylogeny Group included the Myrsinaceae in the family Primulaceae where it is treated as a subfamily (Stevens 2011). However, in this paper the Myrsinaceae is still regarded as a separate family. The genus *Embelia* can be distinguished by habit, being vines or scramblers, and by the flowers, which have five free petals. Vegetatively *Embelia* is distinguished from some species of *Maesa* (now in the family Maesaceae), which also have a scrambling habit, by the secretory glands in the leaves. In *Embelia* the glands are chiefly globular or shortly lineate, but in *Maesa* they form long thin cells. Reynolds (1991) recognised four species of *Embelia* in Australia, of which one, *E. curvinervia* S.T. Reynolds, occurs in both Queensland and the Northern Territory. Ten species are known from New Guinea and the Solomon Islands (Sleumer 1987) and there are at least three species on the Lesser Sunda Islands. Here I describe a new species from the Tiwi Islands, *Embelia tiwiensis* Jackes. This species is known from four collections, one from Melville Island and three from Bathurst Island. Although the material is sterile it can be readily distinguished from other species of *Embelia* based on leaf features, in particular possession of globular pellucid glands in the leaves. These differences are outlined in the key to species occurring in the Northern Territory and nearby areas.

TAXONOMY

***Embelia tiwiensis* sp. nov.**

(Figs 1, 2D,E)

Embelia sp. Tiwi Islands (J. Russell-Smith 8240) N.T. Herbarium, in Short, P.S *et al.* (May 2011), Checklist Vasc. Pl. Northern Territory, http://www.nt.gov.au/nreta/wildlife/plants_herbarium/pdf/200701nt_checklist.pdf

Embelia tiwiensis ab aliis speciebus Embeliae quibus in Australia, Nova Guinea and Insulis Minoribus Sundae habitant, laminis chartaceis cum glandibus numerosis globularibus secretoriis pellucidis in luce transmissa et pilis ferrugineis in pagina infera differt.

Material examined. TYPE – Australia, Northern Territory, Bathurst Island, Ngaru Swamp, 11°43'19"S, 130°20'57"E, 13 June 2011, J.A. Risler 645 & D.J. Dixon (HOLOTYPE: DNA D146206, 2 sheets; ISOTYPES: BRI, CNS).

Additional specimens examined. NORTHERN TERRITORY: Bathurst Island, Ngaru Jungle, Plot 2839, 28 February 2001, J.A. Risler 583 & R.A. Kerrigan (DNA); Bathurst Island, Ilinga Jungle, 17 June 2001, J.A. Risler 805 & R.A. Kerrigan (DNA); Melville Island, 25 May 1990, J. Russell-Smith 8240 & D. Lucas (DNA, JCT).

Description. Vine, semi-prostrate, rarely exceeding 60 cm tall, adventitious roots common, lenticels inconspicuous. Young twigs covered with reddish-brown glandular papillae and/or short hairs. Leaves alternate; petioles 7–21 mm long, papillate; lamina elliptical to broadly elliptical to obovate, (3.5–) 6.5–17.5 cm long, (1.6–) 3.5–7.8 cm wide, chartaceous, discolorous; base

Fig. 1. Holotype specimen of *Embelia tiwiensis* sp. nov. (J.A. Risler 645 & D.J. Dixon, DNA D146206 – 2 sheets. For a note on label discrepancies, see text.

cuneate, symmetrical to somewhat asymmetrical; apex acuminate; margin entire or coarsely and irregularly toothed in upper half of lamina; glands globular in transmitted light, pellucid, appearing dark in surface view; hairs spherical, red-brown and scale-like, present on both surfaces, more common on lower surface; midrib slightly depressed on upper surface, prominent below; lateral nerves 8–12 on either side of midrib, looping near the margin. Flowers and fruits not seen.

Distribution and habitat. *Embelia tiwiensis* is only known from Bathurst and Melville Islands in the Tiwi Island group. It has been found in seasonal spring-fed swamps and riparian jungles. Here the common dominants are *Calophyllum soulattri, Hangnana malayana, Hydriastele wendlandiana, Syzygium angophoroides* and *S. nervosum*.

Etymology. The specific epithet reflects the occurrence of the species on the Tiwi group of islands including Bathurst and Melville islands. It is adjectival.

Note. Contrary to the labels accompanying the sheets comprising the holotype specimen, an isotype stated to be in JCT is housed in CNS.

The specimen label attached to sheet 2 of the holotype specimen was generated in 2011 from the latest Northern Territory Herbarium electronic database. This has resulted in some discrepancies between that label and the one accompanying sheet 1. Importantly, there is a correction in citation of the collection number, from Risler & Dixon 645 to Risler 645 & Dixon. There is also a minor difference, due to computer programming, of the cited latitude of the collection; both sheets are part of the one gathering.

Herbarium abbreviations follow Thiers (2011).

Key to species of *Embelia* from the Northern Territory and Timor

1 Glands in lamina pellucid to pale orange when viewed in transmitted light 2
– Glands in lamina chiefly dark red to black when viewed in transmitted light 3

2 Glands pale orange, both globular and lineate, lamina glabrous ..... *E. viridiflora* (Timor)
– Glands pellucid, globular only, lamina with rusty papillae/hairs on lower surface particularly on the veins ..... *E. tiwiensis* (NT)

3 Inflorescence paniculate, much-branched, longer than leaves, 5-merous ..... *E.* aff. *javanica* (Timor)
– Inflorescence a cluster of racemes, shorter than leaves, 4-merous 4

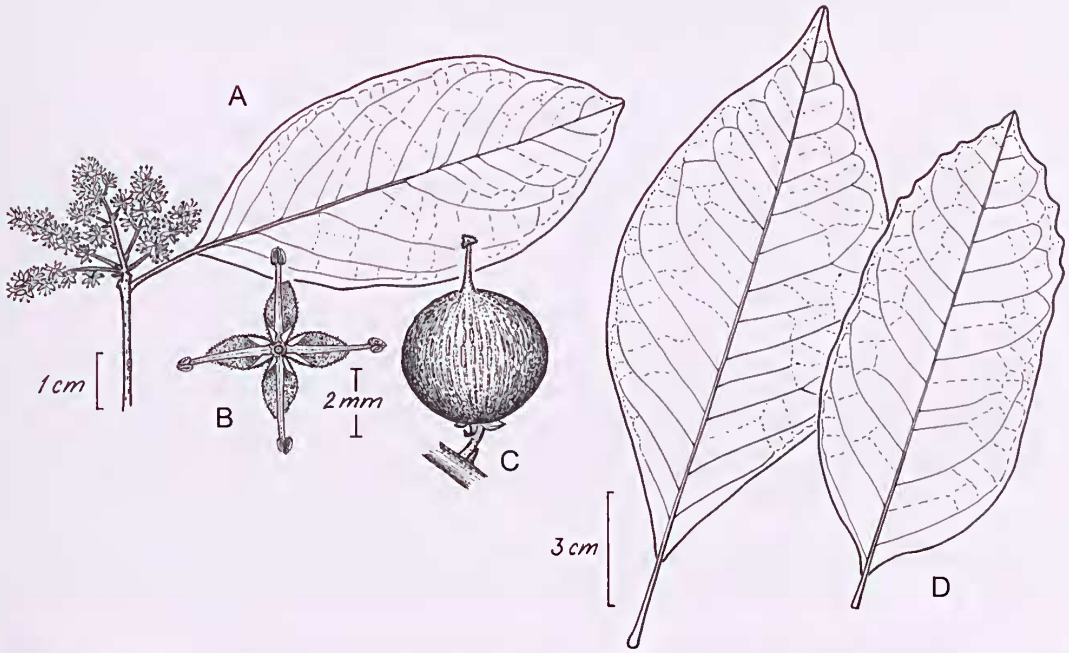

Fig. 2. *Embelia curvinervia* and *E. tiwiensis*, from Jackes *et al.* (in press) Myrsinaceae, *Flora of the Darwin Region* Vol. 1. **A–C**, *Embelia curvinervia* S.T. Reynolds: **A**, leaf (lower surface) and inflorescence; **B**, male flower from above; **C**, fruit (A,B, C.R. Dunlop 5025; C, D.C. Franklin D154622); **D**, *Embelia tiwiensis* sp. nov., leaf shapes, both showing lower surface (J.A. Risler 645 & D.J. Dixon, holotype). All illustrations were based on herbarium specimens.

4 Leaves chartaceous, subtending bracts about 1 mm long..... *E. frangulifolia* (Wetar Island)

– Leaves firm, subtending bracts 2–3 mm long..... .....*E. curvinervia* (NT and QLD)

N.B. *Embelia frangulifolia* Mez has not been recorded from Timor but it does occur on nearby Wetar Island. It may be distinguished from *E. curvinervia* by the chartaceous versus firm leaves and by subtending bracts about 1 mm long versus bracts 2–3 mm long and the latter is generally a much more robust vine.

ACKNOWLEDGEMENTS

My sincere thanks to all who have assisted, in particular Emma Short for the Latin diagnosis, Philip Short for general advice and J-F. Veldkamp from Leiden who answered queries and provided photographs and scans of *Embelia* specimens from neighbouring areas. Darren Crayn is thanked for his constructive comments. Monika Osterkamp provided the illustration based on the type specimens.

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Accepted 16 August 2011